

**REPORT  
OF THE  
COMMITTEE APPOINTED BY THE GOVERNMENT OF INDIA  
TO ADVISE THEM ON THE STEPS TO BE TAKEN  
TO ESTABLISHED A RESEARCH CENTRE IN  
THE INDIGANIOUS SYSTEM OF  
MEDICINE AND OTHER  
COGNATE MATERS**



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सत्यमेव जयते

"We have repeatedly mentioned in this outline the necessity of controlling the facts observed, of discussing the interpretations proposed and the meaning attributed to them in order to accept as true and valid only that which has stood the indispensable test of scientific criticism. This presupposes a special mental attitude which unfortunately is hardly developed in the schools, in the colleges and perhaps even in the universities, namely critical sense. This is the tendency of the mind to seek the true value of facts and results, of methods and concepts, the imperative need for strict control, abundant justifications, precise explanations, as a result of which we accept only those conclusions as final that have successfully resisted the attack conducted against them... The critical spirit, by the way, has nothing in common with the spirit of systematic opposition or with the spirit of disparagement. The critical spirit seeks the truth and hates above all the error; it is an eminently sound spirit. The spirit of systematic opposition takes the opposite side of every proposition, of every conclusion without endeavouring to ascertain their worth. The spirit of disparagement searches for evil everywhere and if necessary invents it where it does not exist. The spirit of systematic opposition and the spirit of disparagement are eminently morbid spirits. You will cultivate in yourselves the critical spirit which you can not develop strongly and vigilantly enough. You will tear out the two others, and if by chance they should some day bud on some old root that has not been extirpated, you will carefully see to it that this shoot be cut as soon as it appears, just as the farmer does with thistles and weeds."



MAURICE ARTHUS'

Philosophy of Scientific Investigation  
Preface to—

De l' Anaphylaxie à l' Immunite, PARIS, 1921

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## INTRODUCTION

1. We were appointed by the Government of India in their letter No. F. 28-2/49-MI, dated the 2nd December, 1949, as members of the Committee to advise them on the question of establishing a centre for research in Ayurvedic and Unani systems of medicine and other cognate matters. The terms of reference were as follows:—

- (i) To work out and submit to Government a detailed scheme for the development of a centre of research in Ayurvedic and Unani systems of medicine on as broad a basis as possible on the lines indicated in paragraph 251 of Volume I of the Report of the Committee on Indigenous Systems of Medicine. In carrying out research at this centre modern scientific methods are the ones to be utilised in order that the fruits of such research may be of proved value and acceptable all over the world.
- (ii) To investigate and define in what manner special training in Ayurvedic and Unani systems can be incorporated during the last year or so of the under-graduate medical course in modern medical colleges, for the benefit of those desiring to qualify themselves in these systems; or alternatively, to suggest how Ayurveda or Unani can be fitted in as subjects for post-graduate medical study. In examining this matter the Committee will give due consideration to the fact that India cannot afford to permit her medical practitioners, whatever systems they may individually adopt, to receive training which will fall short of the standards of medical education considered necessary in all progressive countries.
- (iii) To make recommendations regarding the policy to be adopted as regards the continuance, with such modifications as may be necessary, of certain existing Ayurvedic and Unani medical schools and colleges in which some teaching in subjects such as Anatomy, Physiology, etc., is carried out, keeping in view the need for establishing a uniform system of medical education throughout the country and for ensuring the utilization, to the best advantage, of the available resources in the Country in men and material for the development of medical education.

2. At their first meeting the Committee discussed, among other things, the three specific terms of reference in general and specially the directive given to the committee, contained in the first term of reference namely, "In carrying out research at this centre, modern scientific methods are the ones to be utilised in order that the fruits of such research may be of proved value and acceptable all over the world." After some discussion the Committee unanimously agreed to interpret the expression

"modern scientific methods" to mean "methodology of scientific investigation". The expression was considered to be sufficiently comprehensive, which would take into account all techniques and procedures which would further the objects for which the research centre was to be established, and which would ensure that the fruits of such researches would be acceptable all over the world. The Committee's views on the general principles and procedures which should serve as a guide in the work of the research centre will be explained subsequently. The Committee have refrained from making any specific suggestions for the conduct of research into the several categories listed in para. 251 of the Chopra Committee's report because in their opinion this should be the responsibility of those who would be called upon to work in the centre when established. A reference to this question will be made subsequently in this report.

3. Since most of the members had adequate knowledge of the conditions existing in several Ayurvedic institutions in the Country, with the exception of the institution at Jamnagar, the committee decided that it was not necessary for them to visit those institutions as a committee, before considering their suitability or otherwise for locating the proposed research centre at any of those institutions. The committee, however, requested some members to visit Jamnagar and obtain relevant information in this regard for the benefit of the committee.

4. The committee also noted that some State Governments had under their consideration schemes for the establishment of research centres in the indigenous systems of medicine in their respective areas. The Committee decided to obtain information from various State Governments on this question and also on any other schemes of development with regard to the indigenous systems of medicine which they may have had in view. A copy of the letter sent to the State Governments is enclosed as *Appendix II* of this Report. Such reports as were received from the State Governments were considered by the committee during their subsequent meetings. In addition, the Committee had also the benefit of referring to some memoranda written by distinguished Ayurvedic Physicians in the country which had a bearing on some of their specific terms of reference. The Committee wish to record their grateful thanks to them and to State Governments for the interest they had taken in the work of the Committee.

## PART I

### Scope and functions of the research centre

5. We now proceed to make recommendations on our first term of reference, namely, the development of a research centre in Ayurveda and Unani systems of medicine on as broad a basis as possible and as recommended by the Committee on Indigenous Systems of Medicine. (*Appendix IV*).

6. While it is most gratifying to note that there is a complete unanimity of opinion amongst all concerned for conducting researches in the diverse field of these systems, as is evident from the published reports of several committees which had dealt with this question, there does not seem to be a clear agreement, or a directive, on the manner in which these researches should be conducted in any specific institute which may be established for the purpose. Indeed, there are several approaches to this problem. The Committee believe that the final orientation of research in such an institute and determining the necessary priorities of work in it, should be left to the discretion of those who would be called upon to work in the institute.

7. The Chopra Committee have listed several categories of research, for example, literary research, dietetic research, pharmacological research, research into the fundamental principles and in psychological medicine. A perusal of that Committee's report would give the impression that it was contemplated that several teams should be engaged in conducting researches in all these subjects or categories simultaneously. In that case the researches would be compartmentalised.

8. The Committee believe, that in whatever manner the programmes for research are initiated and conducted, there would be the necessity of co-ordinating these in a manner which would fulfil one of the aims of research so ably stated by the Chopra Committee, namely "to give scientific meaning and significance to the fundamentals of these systems, so that they may be accepted by Science". Or as stated in the first term of reference "may be of proved value and acceptable all over the world". The Committee venture to suggest that all efforts in this direction could be centralised through one channel, i.e., advances made through clinical research. It is necessary to think of literary research, not merely as an attempt at editing all the available books on Ayurveda, including old manuscripts not yet made available to the general students, with a view to producing what would be regarded as authoritative texts in these fields, but literary research should also be directed to the specific purpose of evaluating the practical achievements recorded in the literature in several aspects of diseases, so that those who undertake this work would be able to suggest which treatments and drugs need further elaborate testing, both by clinicians as well as by pharmacologists. Research in dietetics must be carried out on the same lines, i.e., along with clinical and literary research. It may be that the study of 'pathyapathy' or dietetics has been developed 'almost to a fine art' in Ayurveda. Nevertheless, with the modern advances in the science of nutrition, with the evolution of special techniques to study the effects of small moieties of chemical constituents present in several articles in our dietaries, and the modern knowledge concerning the role that such constituents play in health and disease, a new vista has been opened up to examine anew, in terms of modern knowledge, the concepts postulated in Ayurveda.

9. In other words, literary research, clinical research and research in dietetics, should proceed side by side, and the task should be entrusted to a competent team of experts consisting of scholars and clinicians working in closest possible co-operation.

10. When disease entities are studied one by one in this way, apart from any advance that might be made in the therapeutic field, a way would be paved for a thorough understanding of the basic principles of Ayurveda and the knowledge thus gained would be capable of easy transmission to those who desire to have it. Preparation of suitable test books for the teaching of students would equally be facilitated.

11. Clinical research should pave the way for pharmacological research. It can be readily conceded that the orthodox approach of investigating indigenous drugs through isolation of their active principles has not been very fruitful. That the action of the whole drug might be different from that of its component parts when used separately, is a concept which has to be accepted as a good working hypothesis. The whole drug should be subjected to elaborate clinical trials according to precise instructions contained in the ancient texts, and the results statistically analysed. After the beneficial action of such drugs has been established, further researches into it, on chemical and pharmacological lines, should be initiated, if need be, in order to discover the active components which have been responsible for the cure, and to suggest ways and means of

effecting improvements in the therapeutic regime originally adopted. Again, time is ripe for such an approach, for we now possess special physical and chemical techniques which were not available in the past, with the added advantage that the work could be distributed to many laboratories and research centres.

12. These remarks have been prompted by some observations made by the Chopra Committee in dealing with clinical research. They have stated:—

“The fact, however, remains that many diseases have changed their phases and many new ones have come in, since the days of Charaka, Susrutha and Vagbhata. Some old diseases have exhibited variations in their manifestations from age to age, country to country and also in relation to changed conditions of the individual and his social and other environments. The old time principles and methods of diagnosis and treatment, and the description of many diseases will have to be studied, where necessary, revised and re-orientated or supplemented in the light of new and known utility.”

In doing this, the existing indigenous clinical methodology will have to be supplemented by the diagnostic and prognostic techniques and methods evolved by modern sciences. Attempts may also be made to explain the rationale of the original methods of diagnosis and lines of treatment of Indian medicine. Incidentally, this will help in eliminating methods of doubtful value and utility.”

13. Such a study of this ancient system of medicine at one centre conducted by a team of competent workers including modern and Ayurvedic physicians and other scientists utilizing to the full the advances made in medical and allied sciences of modern times, will be most fruitful in bringing out all that is best in this ancient science, which could be “utilised for the benefit of humanity as a whole and without any reservation.”

14. In order to achieve these objectives, the Committee recommend the establishment, in the first instance, of a research centre in association with a well-equipped hospital devoted entirely to the treatment of patients on Ayurvedic lines. The Committee emphasize that this should be a separate institution and not a part or wing of a hospital, where patients are admitted for all types of treatment, including treatment in terms of modern medicine. This is suggested in view of the fact that the patients who seek admission to such a hospital ought to be aware of the nature of the treatment they would be receiving in it. It is admitted that proximity of a well-equipped modern hospital would be an obvious advantage. The Committee consider that for the objectives in view, the institution devoted entirely to the study of indigenous systems of medicine should be a distinct and separate one, in order that it might develop fully its own work and traditions and be a pattern in due course for similar institutions in other centres to follow.

15. The Committee recommend that the staff of the proposed institution should consist of both the ayurvedic physicians as well as physicians trained in modern medicine together with such ancillary staff as is required for a comparative study into all aspects of the problems entrusted to the institution. The general principles which should be followed by the two teams for work in closest possible co-operation have been well

indicated by Capt. G. Shrinivasa Murthi in his memorandum on clinical research submitted to the Committee on Indigenous Systems of Medicine:—

"For this purpose, it would be necessary to be sure of the exact diagnosis in terms of both Indian and Western medicine, to record in detail the exact condition of the patient when he comes in and to keep careful records thereafter of the dietetic and medicinal treatment adopted from day-to-day, and the changes observed in the patient from time to time. The findings and inferences of microscopical examinations, X-ray investigations, electrical reactions, chemical, biochemical and other laboratory tests (including serological investigations) will have to be recorded as and when indicated. The adoption of these and other methods implying a close collaboration between workers in the field of Indian and Western medicine will be necessary if scientific judgment acceptable to the medical world at large is to be pronounced on the reputed values of the therapeutic measures advocated in the texts and traditions of Indian medicine."

16. The Committee envisage that the centre will work more or less on the following lines:—

According to a pre-arranged programme, the team particularly the Ayurvedic physicians, will decide which disease or 'disease syndromes' should be taken up for study. In arriving at this decision the staff of the institute will, no doubt, be guided by a council, the constitution of which will be described separately in this report. Steps will then be taken, as far as possible, to admit such patients as are required for the study. Naturally, for the scientific study of some disease syndromes hospitalisation of patients may not be necessary, for, observations could be made on selected patients as they attend the out-patient department of the institution. In other words, the facilities available at the out-patient department should not be neglected.

17. After the patients are admitted to the hospital, the ayurvedic team will attempt to make an exact diagnosis of the condition in terms of the fundamental principles as enunciated in Ayurveda. It will not be merely a name that will be given to the malady but wherever possible a detailed statement incorporating the several reasons on which that diagnosis has been based will also be made. It is essential to do this, in order to collect precise data for a comparative study of several patients suffering from the same disease-complex in general, and for evaluating the basic principles with a view to evolve an accepted conception of the disease and its etiology. This knowledge could then be incorporated in suitable text books. Naturally, in such a study the team will have to consult many references to the particular disease syndrome under investigation in as many ayurvedic books and texts as are available. While this is being done, special attention will also be paid to the methods of treatment described in such texts. It would be the team's task to select those as would appear to them, on *a priori* grounds, satisfactory for a detailed study. It would be better, perhaps, and as a practical proposition to make a start with the evaluation of single drugs, particularly the recognised and potent ones, in the first instance, simple combinations next, and the elaborate formulae last. It may be necessary in some cases to have a preliminary chemical analysis of a drug to facilitate its selection for investigation. If facilities

are not available for this at the centre, it would be possible to obtain help of other institutes for the purpose. This approach is suggested so that easily understandable data may be made available both for general use and for teaching. Full records will be maintained on the therapeutic regime followed, diets prescribed, and on the day-to-day progress made, so as to have adequate data to assess the results of treatment.

18. After the diagnosis of the malady in terms of ayurveda has been made, the modern team will be called upon to examine the cases, and make their own diagnosis after conducting such laboratory, X-Ray, and other examinations as are required for the purpose. During the course of the treatment full records will be maintained by the modern team till the patient is considered fit to be discharged from the hospital after cure or otherwise.

19. In discussing this question it is necessary to emphasize certain practical considerations that would arise while the patients are undergoing treatment in the hospital. It might be that during the course of the disease conditions may arise which might necessitate surgical intervention. The Committee wish to state that since the modern team is to be associated with day-to-day progress of the disease they would be in a better position to advise whether or not in their opinion, surgical intervention was necessary or imperative. However, it must be clearly understood that the decision to accept that advice should rest solely with the ayurvedic team since the patients would be primarily under their care and receiving treatment prescribed by them.

20. The Committee envisage that some practical difficulties might arise when a patient is about to be pronounced as 'cured' and, therefore, fit to be discharged from the hospital. It is possible that situations might arise during the investigation of many maladies where the conception of "a cure" might be a matter for argument. It is hoped that at the time of the patient's discharge there would be an agreed opinion of both the teams on the outcome of the treatment adopted. In the absence of such an agreement, it would be necessary for both the teams to record their own reasons from their own viewpoints on such matters. This procedure is necessary in order to ensure that results of treatment are assessed properly and on an agreed basis.

21. Since the results so obtained will have to be analysed statistically in due course, the Committee recommend that a competent statistician should be associated with the planning of such studies right from the very beginning. This has been stressed also by the Chopra Committee.

22. When any disease syndrome has been studied in detail, in the manner indicated above, the knowledge gained should be put out in a form as would be understandable by the undergraduate students. The material collected would thus form a chapter of a text book which would be produced in due course.

23. The Committee considered in some detail the question, whether or not teaching activities of any type should be conducted at the proposed Centre. The Committee is of the opinion that the staff of the proposed Centre should not engage themselves on any *routine teaching* at the undergraduate level in the associated institute, should such a one exist, as it would throw considerable burden on the staff which such teaching duties would involve and which would ultimately interfere with the main

function of the institute, *viz.*, research into various aspects of the indigenous systems of medicine. The Committee, however, suggest that, since one of the objects of the institution is the preparation of suitable text-books, it would be of advantage to provide at least some members of the staff opportunities to visit existing recognised institutions in the Country, and to deliver there short course of lectures to the undergraduate students with the specific purpose of ascertaining to what extent the material prepared for the text-books is found suitable in practice in the teaching of undergraduate students.

24. The Committee, however, stress the need of associating post-graduate teaching with the work of the institute from its very inception. The students to be admitted must be of the required calibre, and must necessarily possess adequate knowledge of Sanskrit. Those who have graduated from any of the existing modern medical colleges and who have sufficient knowledge of Sanskrit should also be admitted for such studies along with those who have specialised in the indigenous systems of medicine only. As an inducement to attract students from modern medical colleges, it should be permissible for them, with the sanction of the Universities, of course, to offer a thesis on the work done by them in the proposed Centre to satisfy a part of the requirements in any higher examinations for post-graduate qualifications of any University in India. The advantages of instituting such a measure are obvious. The post-graduate students will not only take an active part in the development of research programmes in the proposed Centre but, after their period of training is over, would form a nucleus of the staff for other centres of research which can be created in the Country, both in connection with the existing schools of indigenous systems of medicine as well as the modern medical colleges.

25. The authorities of the research centre will no doubt make, in due course, rules and regulations for the admission of such students. The Committee feel that, in the first instance, the students should be admitted as probationers for a period of six months during which period facilities should be provided for them for any preliminary studies necessary to enable them to understand the subject in some of its aspects. This will be particularly necessary in the case of students from medical colleges who would have to be given the necessary background regarding the indigenous systems of medicine as a prelude to further study in those systems. After a period of six months, those who are found to lack the special aptitude for this type of work should be weeded out as unsuitable.

26. The Committee wish to emphasize that both the ayurvedic and modern medicine teams should try to understand each other and prepare the schemes of research in co-operation. In the initial stages the two teams will work out full details and prepare working sheets for use in the examination of patients, diagnosis, and interpretation of the data in terms of the 'Tridosha' theory. Understanding of each other's point of view will be essential if the data obtained are to be properly synthesised at a later stage. It is specifically to be pointed out that in such studies the whole staff including the house physicians will co-operate. It is desirable to reach general agreement on the main objectives for which the work is to be undertaken.

27. These detailed statements of the aims and objects of the Centre are made in order to illustrate the conception of a co-ordinated research put forward in the opening paragraphs of this report, and in order to pave the way for a better understanding of the principles of Ayurveda amongst ayurvedic physicians themselves, as well as to facilitate the teaching in this subject to the practitioners of modern medicine.

**The location of the central institute for research in indigenous systems of medicine.**

28. In the light of the foregoing discussion on the manner in which the proposed centre should work, we now proceed to make specific recommendations for the location of the first centre in India for research in the indigenous systems of medicine.

29. In determining the suitability of a place for this centre, the Committee had kept in view the following points:—

- (a) the nature of accommodation that would be made available to the research centre either separately or in association with any of the existing institutes;
- (b) facilities for further expansion;
- (c) the nature and extent of any existing medical library dealing with indigenous systems and library facilities;
- (d) existing laboratory facilities, if any.
- (e) the number of beds, if any, reserved for ayurvedic treatment in the institution;
- (f) the presence of a herbarium, either in the institution itself, or in its vicinity;
- (g) the staff and equipment of a pharmacy, if any, attached to the institution;
- (h) the proximity of a modern medical institution or hospital well-equipped with laboratory facilities and equipment and modern medical library.

30. In discussing this question the Committee took into consideration the facilities available in various institutions, the replies received from some of them on the questionnaire issued, as well as information obtained from some State Governments regarding their future programme of establishing new institutions or upgrading the existing ones in their respective areas.

31. After a detailed discussion on many aspects of this question, and after considering the special report submitted to them by the four members of the Committee who had been requested to visit the institution at Jamnagar, the Committee came unanimously to the conclusion that the proposed institution should be started at Jamnagar in association with the Gulab Kunwarba Ayurvedic Institution. This institution satisfies in a large measure the basic requirements which the Committee has enumerated above. This institution is at present housed in a large newly designed building which had been constructed at a cost of Rs. 20 lakhs. In this building regular classes for the teaching of Ayurveda, according to the curriculum laid down by the Bombay Board of Indigenous Systems of Medicine, have been started. Laboratories attached to this institution have sufficient equipment for the present for pharmaceutical and physiological studies and provision has been made for bio-chemical and pathological laboratories also. The institute has extensive grounds for further expansion.

32. The library of this institution is housed in a separate building. The library contains more than 6,000 volumes of which over 2,000 pertain to Ayurveda. In addition, there are about 120 ancient manuscripts. The rest of the volumes are books on modern medical and allied sciences including subjects like botany, biology, etc. The library is well-staffed

and the institute has some interesting publications to its credit. A few Ayurvedic classics have been translated and published, and translation of *Charaka* is also completed. It should also be noted that the institution possesses a printing press of its own.

33. The institution has a good herbarium. The museum, which is located in the library building, has specimens of nearly 5,000 common Indian herbs, and diagrams of over 3,000 plants growing in India are also available. Indeed, the Committee feel that some of the work done in the literary field is of sufficiently high calibre as to be made use of by the staff of the research centre.

34. The hospital unit is a comprehensive one where provision has been made for the treatment of medical conditions in all the branches of medicine, both according to the modern and ayurvedic lines. The total number of beds available is 266, out of which 50 beds are reserved in a separate block for clinical research in Ayurveda. This block is called the Ayurveda Chikitsa Vibhag. The facilities to provide additional 50 beds to bring up the total to 100 beds, as envisaged by the Committee, also exist. There exists, in close vicinity, a well equipped hospital for modern medicine where facilities of X-Ray and radium treatment are also available. In addition, there exists a *Solarium*, the facilities of which can also be utilised, even in ayurvedic research. Indeed, Jamnagar is the only place in India which can boast of a *Solarium*.

35. The College possesses a small pharmacy where students are instructed in pharmaceutical methods. In addition, there has been established a big pharmacy at a cost of Rs. 10 lakhs called "The Sarangadhar Laboratories." This institution is well-equipped and may be utilised, in due course, in many ways in connection with the activities of the proposed research centre.

36. There is one aspect about the institution at Jamnagar which deserves mention. Here ayurvedic physicians, as well as those trained in modern medicine, work side by side and in full co-operation with each other, since both the teams are interested in many problems of research connected with the indigenous systems of medicine. In the opinion of the Committee, the facilities existing in this institution are such that the work of the research centre could be started almost immediately without having the necessity to construct any new buildings at least in the early stages of work and development of the centre.

37. The institute is under the patronage of Their Highnesses the Maharaja and Maharani of Jamnagar. The State Government of Saurashtra have evinced keen interest in the growth and development of the new centre, and have promised full support to the project. The Committee is of the opinion that the purpose for which the proposed centre is envisaged can readily be fulfilled by locating it in association with this institution at Jamnagar. The Committee is aware that Jamnagar is situated in one corner of the Country. This is not a great drawback, however, since it is well served by rail and air transport. The climate is salubrious and the housing conditions are not apparently so acute as in other places, a point which also deserves mention.

#### **Staff—Recruitment and conditions of service**

38. We now proceed to indicate the nature of the staff required for the centre in order to enable it to fulfil the objects for which it is to be established. The method of recruitment and conditions of service will also be indicated briefly.

39. From the foregoing account of the scope and functions of the institute, it would be clear that when fully developed, a large staff covering many specialities will have to be employed in the proposed centre. The Committee felt that they should recommend, in the first instance, only the minimum basic staff that will be required in order that the centre may proceed to initiate the work on some specialities, particularly clinical research. From the nature of the work envisaged, it is obvious that the staff will be composed of two teams—one for the study of indigenous systems of medicine and the other for collateral observations according to the concepts of modern medicine. The staff of these two teams is indicated below under these specific headings:—

**I. Ayurvedic Team:—**

- (a) Three eminent persons well-versed in Ayurveda of whom at least one should have a sufficiently long teaching experience in one of the recognised Ayurvedic institutions in the Country;
- (b) One Darshanika;
- (c) Three junior assistants of the standing of either "Ayurved Acharya" or "Ayurved Parangata" or an equivalent qualification, and who have passed out from a recognised Ayurvedic institution and who have a teaching experience of at least 5 years;
- (d) One pharmacist possessing sound knowledge of "Daravyaguna", "Rasashastra" and "Bhaishajya Kalpana."
- (e) House physicians who have qualified from a recognised ayurvedic institution, the number to be employed depending on the number of beds in the hospital in a ratio of one house physician for 20 beds.

**II. Modern Team:—**

- (a) One physician;
- (b) One pathologist and bacteriologist;
- (c) One B.Sc. (Pharmacy) with knowledge of pharmacognosy;
- (d) One biochemist;
- (e) House physicians—possessing the M.B.,B.S. degree of any recognised university.

40. In addition to the above, provision will have to be made for the employment of a statistician and also the ancillary staff required for the laboratories. The Committee envisage that for the purpose of X-Ray diagnosis, for radium therapy, if required, for anaesthesia, and for other specialities, the concerned staff in the existing modern hospital will be available. The staff as listed above should be made available, in the first instance, and should be augmented as and when needed as the work progresses. The Committee further recommends that when investigations in the 'Siddha System' are undertaken in the institution, a physician, well-versed in that system with the required technical assistants will have to be appointed in addition to the staff noted above.

41. The Committee recommend that when the concepts of the unani system of medicine are taken up for study, the same categories of staff as recommended for the Ayurvedic studies, will have to be appointed.

42. The staff of the attached hospital and office staff, etc., have been listed in *Appendix I*.

43. In discussing the question of the recruitment and conditions of service for the staff of the proposed research institute, the Committee took into account the several recommendations which had been made in this respect by other committees which were called upon to make recommendations for the establishment of similar research institutes in modern medicine. The Committee noted that the Health Survey and Development Committee had recommended the establishment of an All-India Medical Institute as a centre for postgraduate teaching and research in modern medical subjects. There was yet another committee which was called upon to report on the question of establishing an institute for leprosy research. These committees had very carefully considered the question of recruitment of staff and conditions of service regarding these institutes. The general principles enunciated by these committees have been taken into account in considering the question *vis-a-vis* the proposed centre for the study of indigenous systems of medicine. All committees agree that the staff of any research institute should be of the very highest professional standing and should have the capacity to work harmoniously with their colleagues. We also reiterate the viewpoint of the Health Survey and Development Committee, *viz.*, the responsibility for the selection of the essential staff of the research centre should vest with those who would be in a position to judge the technical competence of the candidates. It is of the utmost importance to bear these requisites in mind in view of the pioneering nature of the work to be conducted in this institute, and the influence that it will have ultimately on the whole question of medical education in the Country.

44. The Committee, accordingly, recommend that the selection of the senior staff envisaged for the centre should be entrusted to a committee consisting of the following:—

- (a) A member of the Union Public Service Commission (Chairman);  
*Members*
- (b) One representative of the Government of India in the Ministry of Health;
- (c) Three members representing the indigenous systems of medicine;
- (d) One representative of the modern system of medicine.

45. This committee should be constituted by the Government of India, in the first instance, and the selection of candidates for all other subordinate posts in the proposed centre, as well as for subsequent vacancies, arising in any of the categories listed, should be referred to the Governing Body of the proposed research centre.

46. The Committee debated at great length the question of appointment of the Director for the proposed research centre. The Committee was in full agreement with the views expressed in this connection by the Chopra Committee in paragraph 284 of their report. It is, of course, essential that the person who is appointed as the Director of the institute should be one who is of high scientific attainments, and should be competent in every respect to guide the work of the centre in all its spheres. In addition, the Committee wish to state that he as well as the other members of the staff should not be connected in any way with any pharmaceutical concern, large or small. The Committee envisage some difficulty, however, in securing the services of such highly qualified technical expert. The Committee also stress the necessity of securing the best available talent for the three senior posts in the Ayurvedic Team. This in itself, in practice, will not be an easy procedure. In view of these

difficulties the Committee suggest that the Selection Committee recommended above should, in the first instance, select the first Director of the institute, and later, with his co-operation, the other two senior members of the team for constituting the first team of research workers in the institute. The Director will also be the head of one of the sections in this institute and be responsible for one specific scientific activity in it, in addition to managing the day-to-day affairs of the institute. In the matter of selection of both, i.e., the Director as well as the senior members, the Committee wish to make a specific recommendation, viz., the Selection Committee should also be authorised to interview eminent scholars even if they have not applied for these posts, with a view to enlarge the field of selection to secure the best talent available in the Country.

47. The Committee wish to stress, however, one important aspect of the Director's work. By virtue of his position it is but natural that his advice will be sought in many directions by many State authorities and other institutions in the country. As the Director will be a member of the team of research workers, and all his time is likely to be taken up by his own scientific work as well as administrative duties, he should not be burdened with any extra-institutional activity of any type whatsoever. The Committee is of the opinion that, as far as possible, the question of major policies in respect of indigenous systems of medicine should be referred by various organisations and State Governments not to the Director, but to the Governing Body of the institute, or, in technical matters, to its Scientific Advisory Council.

48. In determining the conditions of service to be offered to the staff of the proposed research centre, the normal rules and regulations which are applicable to the respective categories of government servants in the Central Government should be adopted with such exceptions as have been noted below. Regarding scales of pay for the technical staff of the institute, the Committee is in full agreement with the recommendations of the Chopra Committee in this regard. The details of staff and scales of pay are given in *Appendix I*. The other essential terms of service are stated as follows:—

1. The staff to be recruited should be on a full time basis and should be debarred from private practice;
2. Heads of sections and technical staff should be appointed on probation for a period of two years, which can be extended to a third year, if necessary;
3. For the initial recruitment of the senior members of the staff no rigid age-limit should be fixed in order to ensure selection, in the first instance, of persons of suitable calibre on as broad a basis as possible;
4. The position should be reviewed after a period of five years and special rules for the recruitment and conditions of service should be made in the light of the experience then available.

#### **Technical and administrative control of the Institute**

49. In making recommendations regarding the technical and administrative control of the institute, the Committee wish to express their agreement with the principle already enunciated by other Committees with regard to the establishment of similar research institutes in the country, viz., "the institute, from its inauguration, should be free from

the routine administrative control of a department of the government, in order that it may be able to develop its activities independently and with freedom." The Committee wish to emphasize that, when established, this institute will be the first of its kind in India, devoted solely to research in the indigenous systems of medicine. It will be essential for the institute to develop its own procedure and in doing this the institute may not be able to derive much benefit from the experience and established procedures evolved by other research institutes in the country. It is equally necessary that, in achieving its objectives, the institute should have the advice and guidance from eminent scientists, heads of research organizations in the country, and from all State Governments as well. In this context the Chopra Committee had recommended the establishment of a Board or Council of Research in Indian Medicine. It was recommended that the Council should perform such functions as the formulation of research policies, organization and control over the research institute and other cognate matters. The Committee, however, feel that the purpose for which the institute is to be established will be served better if the administrative and technical functions are separated and entrusted to the two bodies recommended by us for the purpose.

50. The Committee recommend that the administrative control of the institute should vest in a Governing Body on which representation may be secured for all those interested in the sound development, on scientific lines, of indigenous systems of medicine. The Committee recommend the composition of the Governing Body as follows:—

(a) Nominee of the Ministry of Health, Government of India . . . . .	1 (Chairman ex-officio)
(b) Representatives of Parliament . . . . .	2
(c) Representatives of States . . . . .	3
(d) Representatives of the profession . . . . .	3*
*(i) Indigenous systems of medicine . . . . .	2
(ii) Modern medicine . . . . .	1
(e) Representative of the private endowments . . . . .	1
(f) Director of the Institute . . . . .	1 (Member- Secretary)

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51. It will be seen that by giving representation to the States on the Governing Body, they have been brought into intimate relationship with the working of the institute. This is essential if a full liaison has to be established and maintained between the central institute and the other institutions of the indigenous systems of medicine in the States. It is suggested that the first nominations should be made by the Central Government and the subsequent vacancies in this category, as they arise, be filled in by the Governing Body itself in consultation with the authorities of the States. The final procedure which will ensure representation of all the States in rotation as well as for other categories will, no doubt, be worked out by the Governing Body in due course.

52. The Committee envisage that the Governing Body will be authorised, in due course, to accept donations from private trusts and organizations in furtherance of the objects for which the institute is to be established. In addition, such trusts are also managing a number of unani and ayurvedic institutions in the country. It is essential that the work of such institutes should be co-ordinated in some manner possible, especially in the field of research. In order to facilitate this development, the Committee has given one representation on the Governing Body to private endowments.

53. The Committee recommend that the Central Government should nominate the members of the first Governing Body in the categories mentioned above. Apart from the Chairman and the Member-Secretary, who will be *ex-officio* members, the other members will hold office for a period of three years. The members who retire will not be eligible for re-election for a period of one year. Each year for the first two years, three members will retire by ballot. In this way, the Committee hope, all interests will be represented on the Governing Body which would be in a position to tender such advice as to ensure the progress of research in the centre on sound lines.

54. The functions of the Governing Body will be as follows:—

1. To consider budget' proposals of the institute;
2. To lay down the general administrative policies of the institute;
3. To frame rules and regulations for admission of students, research workers, etc. in the institute, with due consideration to the requirements of different parts of the country; and
4. To frame such rules and regulations as may be necessary for the good and efficient working of the institute.

It will be seen that the functions of the Governing Body are more or less the same as were envisaged by the Chopra Committee for the Board of Research in Indian Medicine. The Governing Body will meet ordinarily once a year to review the work and adopt the annual report of the institute.

#### *Scientific Advisory Council:*

55. The Committee have given considerable thought to the question as to how to ensure the development of scientific work in the institute on sound lines. The success or failure of the centre will depend entirely on those who are called upon to direct its activities. The Committee have taken into consideration the fact that, apart from those who would be appointed to the technical staff of the institute, there would be other eminent men who have devoted their lives to the study of indigenous systems of medicine and who have already contributed a great deal to its advancement. It is conceivable that such men may not agree to serve as salaried members of the staff of the institute. Nevertheless, the Committee feel that they should be associated in some manner with the working of the institute, particularly in initiating research programmes on proper lines, and rendering advice on many technical matters when necessary. It is for this purpose that the Committee recommend that a Scientific Advisory Council be constituted whose essential functions would be to assist the technical staff in formulating the research programme of the centre for all categories of research both initially and during the subsequent years of its development.

56. The Committee recommend that the Scientific Advisory Council should be constituted as follows:—

(i) Physicians representing the Indian systems of medicine .....	3
(ii) Representative of the modern medicine, preferably a research worker of standing.....	1
(iii) Pharmacologist .....	1
(iv) Chemist with experience in the study of indigenous drugs..	1
(v) Director of the Institute .....	1

57. The Government of India should nominate the members of the first Scientific Advisory Council, or delegate that function to the Governing Body when it is constituted. The Council will elect its own Chairman, and the Director of the Institute will be the Member-Secretary. The Council will meet as often as necessary. The Council will have no executive functions to perform and the day-to-day management of the Institute will be the responsibility of the Director.

### Financial considerations

58. The Committee recommend that the responsibility for the establishment and maintenance of a research centre in the indigenous systems of medicine (as envisaged in this report) should vest with the Government of India who should provide the necessary funds for both recurring and non-recurring expenditure of such an institution. In this connection the Committee wish to reiterate the recommendation made by the Health Survey & Development Committee *vis-a-vis* the establishment of the All-India Institute of Medical Research, namely, "the Central Government should divest itself of direct responsibility for the administration of the Institute". It is recommended that whatever funds are required for the maintenance of the institute should be placed at the disposal of the Governing Body as the administrative control of the Institute would be its responsibility.

59. The Committee, however, feel that in view of the widespread interest shown by various State Governments in such developments in recent years, as well as by private organisations, additional financial assistance will be forthcoming from such sources. This development should be encouraged in which case the Governing Body will be able to secure adequate funds which could be ear-marked for special activities in the institute, and its subsidiary centres when they are formed.

60. Subject to the considerations noted above, we now indicate the non-recurring and recurring expenditure that would be incurred, when the institute is brought into being on the lines envisaged in the report.

61. The Committee have recommended the establishment of the institute at Jamnagar in association with the facilities that are already available. The Committee have already pointed out that the existing facilities are of such a nature that the work could be started there immediately. There is no need to undertake the construction of any new buildings for the purpose. It may be necessary, however, to make some budget provision for such modifications of the existing arrangements as are considered necessary. While it is difficult to envisage the nature of such modifications, the Committee recommend that an overall minimum provision of Rs. 50,000 should be made for the purpose.

62. In the associated laboratories in Jamnagar and in the existing hospitals of modern medicine, there exist good facilities for laboratory examinations. It may be necessary, however, to augment these by providing special equipment for research purposes, especially in connection with the work of the modern medicine team. The Committee recommend, therefore, that an overall minimum provision of Rs. 50,000 should be made for this purpose.

63. The proposed research centre is to be established in connection with a well-equipped hospital for the treatment of patients on the lines advocated in the indigenous systems of medicine. It has been recommended that the provision of a 100 bedded hospital will be necessary for

the purpose in view. The Committee have, however, estimated for the present the recurring cost of running such a 75 bedded hospital at Rs. 2,78,900 for the first year, and at Rs. 2,87,624 at the end of the fifth year, since the essential details for working out these estimates were readily available in published reports.

64. The total salaries of the staff employed at the centre including research staff and ancillary personnel amount to Rs. 1,08,840 in the first year and Rs. 1,35,720 for the fifth year. The details of the staff employed, including their salary scales, are given in *Appendix I*. In addition, provision will have to be made for the necessary office staff for the institute with adequate provision for contingent expenditure including office equipment, stationery and travelling allowance. The total expenditure of running the institute, therefore, including the items listed above, is estimated at Rs. 4,30,800 for the first year and Rs. 4,69,056 at the end of the fifth year. The details are given in statement No. 4 in *Appendix I* attached to this report.

65. The Committee have thus indicated the nature of the expenditure to be incurred year by year for the first five years. In doing this, it will be seen that no provision has been made for financing research under the auspices of the central institute in other centres in the country and in association with other colleges devoted to the studies of indigenous systems of medicine. As indicated previously in the report, it will be necessary to distribute some of the work envisaged by the team of workers in the central institute to other centres, where better facilities might be available for such a study. It will be sometime before these developments occur, and the Committee consider it unnecessary to suggest any specific allotment of funds, at this stage, for the purpose. However, we recommend that the Government of India should place in due course additional funds at the disposal of the Governing Body of the Research Institute to give grants-in-aid for approved schemes of research work established and recognised institutions in the country.

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**PART II**  
**INTRODUCTION**

66. We now proceed to consider the second and third terms of reference which deal essentially with some aspects of medical education, for example, the teaching of Ayurvedic and Unani systems in modern medical colleges, and the standards of medical education, including those of modern medicine, in institutions of indigenous systems of medicine. In considering these two terms of reference, the Committee's attention has been drawn to two specific directives, *viz.*, (i) that "India cannot afford to permit her medical practitioners, whatever systems they may individually adopt, to receive training which will fall short of the standards of medical education considered necessary in all progressive countries" (Second Term of Reference), and (ii) "make recommendations keeping in view the need for establishing a uniform system of medical education throughout the country, and for ensuring the utilization, to the best advantage, of the available resources in the country in men and material for the development of medical education" (Third Term of Reference).

67. Though these directives have been stated separately in each of the two terms of reference, in the opinion of the Committee both of them have to be considered with reference to the questions under consideration. It is obvious that India cannot afford to have a low standard of medical education, either in modern medical colleges, or in those devoted to the teaching of indigenous systems of medicine. It is equally obvious that there is the need for establishing a uniform standard of medical education in all institutions which seek to 'train doctors' and their ultimate utilization to the best advantage of the country.

**Teaching of indigenous systems of medicine in modern medical colleges**

68. We now wish to express our views on the question of incorporating instruction in indigenous systems of medicine in the curriculum of modern medical colleges. The Committee have very carefully considered the point of view whether such a training programme could be initiated at the undergraduate stage of medical education, or, whether it should be advocated only as a subject suitable for post-graduate study. We are of the opinion that none of these two possibilities is feasible at the moment. In this connection it is necessary to point out that the curriculum for the undergraduate teaching in modern medical colleges is likely to be revised, and in some ways quite drastically, in the near future. The subject, we understand, is under the consideration of the Medical Council of India. The newer trends in medical education, to which attention had been drawn by the Health Survey and Development Committee and to which reference has also been made later in this report, are being studied in great detail, and it is likely that some of them will be adopted in framing the new curriculum for undergraduate teaching. Pending the final decisions in this respect, we feel that it would be premature to make any concrete suggestions for incorporating the teaching of indigenous systems of medicine at any appropriate stage in the curriculum for the undergraduate medical student. The absence of suitable text-books is also a real difficulty. The paucity of trained teachers, who would be able to explain effectively the concepts of the indigenous systems to graduates of modern medical colleges, has also to be considered. Thus, it does not appear that the time is ripe to initiate such studies, even at the postgraduate level, in existing modern medical colleges in the country.

69. The Committee, however, are of the opinion that, in some manner at least, early attempts should be made to foster the study of these subjects in these institutions. It must be admitted that the concepts of these

systems are held in veneration by a large section of our people. Those concepts have permeated the fabric of our society, and have exerted marked influence on the development of the healing art in our country. "A good deal of medical practice persists as an art, and will probably remain so for a long time to come, because of the incompletely definable situations which arise when man deals with man, either during health or disease." Without a proper appreciation of these factors, medical education cannot be regarded as complete for those, at any rate, who are to practise in India, and who are, ultimately, expected to occupy an honourable position as friends, philosophers, and guides of the people among whom they practise.

70. The best way to achieve this would be to implement, in the first instance, the recommendation made by the Bhore Committee, *viz.*, the institution of a chair in 'History of Medicine' in universities. This measure, in itself, will serve to create an interest in the ancient systems in the minds of the students, both undergraduates and postgraduates, and will help materially to implement the recommendations made in para. 24 of this report, as naturally this provision would necessitate the study of medicine in India.

#### Schools of indigenous systems of medicine— Reorientation of studies, etc.

##### **(a) Need for reorientation**

71. In the third term of reference, we have been asked to make recommendations regarding policies to be followed in respect of the existing schools of indigenous systems of medicine and to suggest such procedures as are necessary to raise the standard of medical teaching in those institutions, including the teaching of modern medical subjects, and thus help, ultimately, for the evolution of a uniform system of medical education in the country. The object underlying such measures is to ensure that teaching of modern medicine in these institutions is approximated to the extent possible, with that prevalent in modern medical colleges.

72. We are aware that this question has been the subject of deliberation by many committees previously. These committees were set up primarily for considering the question of the revival of the Indian systems of medicine on sound scientific lines. The findings of all these Committees were in agreement at least in one respect, *i.e.* the standard of medical education imparted in these institutions throughout the country was, indeed, very low. The Chopra Committee had stated, for instance, as follows:—

"After a careful study and inspection of many of the institutions imparting medical education, we are of the opinion that it is in the interest of the students and the public that medical education is confined to those institutions only which can come up to a certain prescribed standard. No others should be allowed to take in students and turn out half-baked products with high sounding titles. Such products are dangerous; for, their titles give a spurious guarantee of qualifications which are no qualifications. We have been shocked to see institutions with high-sounding names, which were ill-housed, ill-equipped and ill-staffed, with little or no in-door hospital accommodation and which yet were engaged in training the future Vaidyas and Hakims. Such institutions should be put an end to, and certainly they should not be the recipients of any financial help from Centre or Provinces. The

case of endowed private institutions presents some difficulties. We are, however, of the opinion that these too should cease to be teaching institutions and should convert themselves into medical relief institutions or amalgamate themselves into a proper teaching institution".

73. Another Committee set up in Bombay had more or less reported in the same manner. They had stated that there was hardly any uniformity in the work done in the teaching of ayurvedic and unani systems of medicine in any of the institutions visited by the Committee. Teachers employed in these institutions differed in their qualifications and capacity considerably, not only from institution to institution but also in the same institution. As regards the pré-medical subjects, they had found that with few exceptions, no instruction was being imparted to the students as well-equipped laboratories did not exist for the purpose. The same apparently was true about the teaching of preclinical subjects. In many institutions these subjects were taught very poorly and, indeed, there were no adequate facilities for even an elementary study of anatomy and physiology. As regards the teaching of clinical subjects, the Bombay Committee had reported that they "were amazed to find that there were not adequate facilities in any of the institutions."

74. The knowledge which the students gained at the end of their courses in such institutions was so poor and inadequate that it had neither satisfied the students themselves, nor their teachers. This is, indeed, a matter for very serious consideration, for no advance in medical knowledge could be expected from the products of these institutions, and certainly less in the knowledge of Ayurveda. It was for this reason that the Chopra Committee had reported that it would be much better to have only well-equipped institutions, even if these were few in number.

75. These remarks have been made with only one purpose in view, not to belittle the efforts of those pioneers who, with the best of intentions, had attempted to revive the indigenous systems of medicine on sound lines, but to draw attention, once again, of the authorities concerned to the unsatisfactory state of affairs existing in these institutions. For, even after publication of such data, no serious attempt has apparently been made to remedy the defects noticed, and yet many institutions of a similar nature continue to be established throughout the country.

76. From what has been stated above, we are of the opinion that it is essential to upgrade the existing institutions to at least one common acceptable standard. The manner in which it could be accomplished will now be discussed.

#### **(b) Modern concepts of medical education**

77. In approaching this question, the Committee could not afford to overlook the fact that apart from keeping alive the lore of ancient systems of medicine, the primary purpose of these institutions was to train 'doctors' who would be well equipped to give that service which is demanded of them by their patients. It is necessary to stress this, for, it is only when this aspect is fully understood that the question of instituting any curriculum can be satisfactorily considered. "The aim of medical education is not to impart to the student a mass of factual information in each branch of medicine but to equip him with sound basic principles, including the scientific outlook and method, a knowledge of the fundamentals of medical sciences, competence in, and understanding of, certain indispensable techniques, and intellectual resourcefulness and initiative in the handling of unusual and unexpected situations." We, therefore,

wish to emphasize the oft reiterated view that one of the aims of the curriculum should be to produce a competent general practitioner. This has special significance in India, where many medical men are required to practise their art in isolation, and away from centres where adequate facilities for diagnosis, treatment and consultations are normally available.

78. Any course of medical training in institutions of indigenous systems would have to include, therefore, not only instructions on the fundamentals of the indigenous systems of medicine, but adequate knowledge of modern medicine in all its aspects. This view has now been accepted in principle by many, though the question as to what extent, and in what manner modern medicine should be taught, may still be a matter for discussion. In considering this subject, it is necessary to take into account the existing state of medical knowledge in respect of modern medicine, for, that will determine, for the period, the nature of instruction to be imparted to medical students. As one distinguished educationist said the other day:—

"The progress of medicine under the impetus of scientific method has been remarkable; facts have led to newer facts, observations to further observations, and experiment to more experimentation. The pace is now so fast and furious that it is impossible for any one person to keep track of advances in its various sub-branches. The knowledge acquired in the last two decades has been probably greater than that amassed in the previous two thousand years."

79. These advances are striking in the therapeutic field. The introduction of sulpha drugs, antibiotics, liver extracts, insulin, have changed the complexion of many diseases. The advances in surgical technique have been equally remarkable. Introduction of newer insecticides has been of special significance to India, for, they have opened up new avenues for the control of epidemic diseases which had taken serious toll of lives in the past. The future medical practitioner must be thoroughly acquainted with all these developments. It is not necessary that he should be able to apply these technical procedures himself at all times, particularly in surgical specialities, but it is essential that he should have the knowledge which will enable him to recognise the need for calling in the aid of these specialities for the betterment of his patients. This view has received acceptance also from the Chopra Committee.

80. They had also accepted the point of view that the practical side of these subjects should be taught fully according to 'Western' methods. In this connection it is necessary to bear in mind that it is not possible to divest the practical side from the theoretical in the study of these subjects. Surgery does not mean proficiency merely in operative procedures. In arriving at a decision to operate, the surgeon has to summon to his aid all the knowledge, both theoretical and practical, which he has gained in other subjects, such as anatomy, physiology, medicine, pathology, bacteriology, etc. In other words, the whole field of modern medicine will have to be covered in much the same manner as is done in the teaching of these subjects in modern medical colleges.

81. The Committee in discussing these several aspects of the question came, therefore, to the conclusion that in the training programme of a doctor in any of the schools, whatever be the nature of instruction in the indigenous systems of medicine, it would be necessary to incorporate in the curriculum that amount of teaching of modern medicine which was considered necessary by the Health Survey and Development Committee for the training of a 'basic doctor'.

82. It would be profitable here to mention briefly the newer trends in medical education on which the conception of the training of a basic doctor has been evolved. This has been the subject of discussion by many committees in the U.K. and the U.S.A. Teachers of medicine everywhere had agreed that the existing curriculum in medical education required drastic reorientation in many ways. It was realised that it had not kept pace with modern knowledge, and that subjects were incorporated in it, as necessity arose, and as isolated additions rather than as integral part of a comprehensive plan. The discussions had ranged over a wide field, for example, the nature and content of premedical education, the orientation of studies in preclinical subjects, and co-ordination of teaching in clinical subjects; qualifications of students and method of their selection; the duration of the course of training; the manner in which examination should be conducted, and all other matters which had an ultimate bearing on the production of a successful doctor. It was stressed that in the doctor—

“We require a man of high character, able and willing to maintain the true dignity of a great profession, and to live up to the high ethical traditions of Medicine; of good general education, of interest, activity and some *savoir-faire*; a man of learning and knowledge in his vocation, with technical skill and medical experience; but above all a practical man with ideas and application with a forward-looking mind, able to participate in the growth and development of medical science, trained in the scientific method, and inspired by the scientific spirit—in other words a man of accurate observation, of ability in experimentation, and of sound judgment and interpretation.”

83. Keeping all these requirements in view, most of these committees had made recommendations on the following lines:—

- (1) The teaching of premedical subjects, *viz.*, physics, chemistry and biology, should be of a very high standard.
- (2) The teaching of anatomy, physiology and biochemistry, *i.e.* of preclinical subjects, should be completely reorientated and emphasis should be laid on the study of normal man with the following aims:—
  - (i) To provide a basis for the understanding of the morphological, physiological and psychological principles which determine and influence the organization of the living body as a functioning unit;
  - (ii) To relate and interpret the structural organization and normal physiology of the human body and thus to provide the data on which to anticipate the disturbances of function which will probably result from interference with normal structure and structural relationships.
  - (iii) To enable the students to recognise the anatomical, physiological, and psychological basis of the clinical signs and symptoms of disorder due to injury, disease, or mal-development;
  - (iv) Similarly, to help the student to understand the factors involved in the development of pathological processes and the possible complications which may arise therefrom;

(v) To give the student such knowledge of the preclinical subjects as will enable him, ultimately, to employ competently and rationally all ordinary methods of examination and treatment (including minor surgery) that may involve such knowledge."

[Reference. "The Training of Doctor" (1948)—Medical curriculum Committee of the British Medical Association].

(3) In the study of the clinical subjects the purpose "should be to teach the student the general principles of medicine; to train him to a sufficient degree of skill, to diagnose and treat common ailments in minor medicine and surgery and to recognize conditions for which he should summon some expert help and so orientate his attitude towards medicine that he sees his patient as a whole."

(4) Special attention should be paid to the selection of students, and employment of 'special techniques' for the purpose should be considered.

(5) The teaching of the whole curriculum should be of four years' duration, after the cessation of which there should be a compulsory internship for a period of one year. On the other hand, the Committee appointed by the British Medical Association has suggested overall period of 7 years for medical education including the period of internship. This is on the assumption that the medical student begins his training in the university at the age of 18 years.

84. Some of these recommendations which have been made after deliberate consideration, would strike a familiar chord in the minds of those interested in the study of Ayurveda especially with reference to measures designed to promote the study of 'the man as a whole'. We already see an integration, at any rate, of outlook. It may be mentioned that some of the points stressed had been considered by the Health Survey & Development Committee when they laid down the broad outlines of the curriculum for the training of a 'basic doctor'.

85. Regarding the teaching of indigenous systems of medicine in the respective medical colleges, many committees were only content to note that these systems should be restored to their full utilities and be developed with modifications and additions necessitated by modern advances. The differences in many of the existing schools, therefore, are not so much in the mode of teaching of the ayurvedic or unani subjects but more in the manner in which modern medical subjects are taught in those institutions. It is only in recent years that teachers of indigenous systems of medicine are considering the question of re-orientating the teaching of their own subjects in some manner possible. The process has been hampered, however, on account of the lack of suitable text-books which could be used for teaching, as well as diversity of interpretations in the minds of the teachers themselves, of many of the terms in Ayurveda.

### **(c) Recommendations**

86. In the foregoing paragraphs we have indicated the need for reform in medical education in schools and colleges devoted to the study of indigenous systems of medicine.

87. The Chopra Committee had recommended that—"In the colleges of Indian medicine the basic qualification of admission should be raised to the intermediate with the three sciences, physics, chemistry and biology for the Degree Course." We agree with this general recommendation.

88. We would like to stress that in addition to the aforesaid qualification in science, it is also necessary for the students to possess an adequate knowledge of Sanskrit if they are to take up the study of Ayurveda, or, of Arabic if they are to take up the study of the Unani system of medicine. In the opinion of the Committee, the knowledge of Sanskrit required of students should be at least of the Matriculation standard of any recognised university or the 'madhyama' standard of oriental institutions. It is equally true that we realise that students possessing an adequate knowledge of Sanskrit, or Arabic, as well as the science qualification stipulated above, may not be readily forthcoming in view of the present trends in teaching in universities in several States in the country. The Committee, therefore, suggest that such science students as had not appeared at the Matriculation examination with Sanskrit as their subject, but who had before or subsequently put in a course of study in it, should also be admitted to the institution, after passing a special examination in that subject.

89. We believe that, in due course, the teaching in the early years in the universities would be reorientated with the inclusion of some sociological subjects as envisaged by the Chopra Committee and with adequate facilities for the study of Sanskrit. We also consider that once the policy for admission of students to these institutions has been defined, the students who are desirous of being trained as doctors, as well as their guardians, would, no doubt, see that they do possess the qualifications stipulated for these studies. We recommend that the institution concerned with higher secondary and university education will make provision in due course for such studies.

90. When the standard of education is thus raised, we consider, a way will be opened for the efficient teaching of subjects relating to modern medicine both preclinical and clinical. That there is an urgent need for improving the standard of teaching of preclinical subjects is admitted by all. We are of the opinion that in the teaching of preclinical subjects, the newer trends, to which we have previously referred to, should be taken into consideration and only the minimum time required for the purpose should be allotted for them in the curriculum. This period, at any rate, will not exceed 1½ years.

91. It has to be borne in mind that this reorientated teaching of anatomy and physiology is yet to be introduced in modern medical colleges. It is expected that in due course the teaching of these subjects in these colleges will fall in line with the recommendation made above. When that is done, it will be seen that so far as anatomy and physiology are concerned, the first 1½ years' study will be of the same standard for both the Indian system of medicine and modern medicine.

92. In this connection we have to draw attention to a new trend of thought in medical education, *viz.* the teaching of psychology, or as it is called by some, 'human biology'. This has been specially stressed in the Report of the British Medical Association. This teaching is included at this stage for the study of 'mental processes in the general study of the normal structure and function of the human-being.' It is contended that such a study will provide the student with basis for 'the rational appreciation of the doctor patient relationship.'

93. The reason for mentioning this at this stage is also to draw attention to a similar recommendation made by Dr. Govindaswamy when he advocates the studies of 'Darshanas' by those intending to take up medical career. According to him, the concept of psycho-somatic medicine and philosophy, and the problems of personality, as developed in

these books can be taught very readily at the start. This suggestion, in our opinion, is worthy of serious consideration.

94. Turning to clinical subjects, the Committee feel that the general principles enunciated heretofore, with reference to the aims of medical education, should be followed in framing the curriculum. We appreciate that there will be considerable difficulties in implementing this recommendation in institutions of indigenous systems of medicine, since training of both i.e., the Ayurvedic or Unani subjects, and instruction in modern medicine, will have to be given concurrently. We have already drawn attention to the fact that, even with the reorientated teaching programme in medical education it will not be possible to shorten the period of training for modern medicine subjects to less than five years. On the contrary, as has been stated before, the Committee of the British Medical Association has suggested a still longer period of training, in spite of their recommendation that a detailed instruction in any of the specialities in medicine and surgery, or in laboratory sciences, should be excluded from the undergraduate curriculum. The Chopra Committee, in discussing this aspect, considered that it was still possible to give the required training within a period of five years by the adoption of a higher basic qualification for admission, improved methods of instruction, and elimination of unnecessary details in the teaching of both the systems of medicine. It is true that by adopting the higher qualification for admission, some time will be saved in the curriculum which is now being devoted to the study of basic sciences in these institutions. Similarly, by eliminating unnecessary details, some more time could be "salvaged". Even so the total number of hours thus made available will not be so many, as to facilitate the allotment of sufficient time for all the subjects to be included in the curriculum. We realise that with the experience at present available, it would not be possible to recommend a curriculum which would fulfil all the requirements of medical education as envisaged in this report. We believe that when the results of the working of the research institute are made available in due course and suitable text books are prepared, they would provide sufficient basis to formulate a really suitable curriculum for undergraduate medical studies. Till such time, however, we recognise the need for adopting a curriculum which will be an advance over the existing ones, and which could be introduced uniformly in all institutions in the country. The Committee hopes that the curriculum as given in Appendix V will serve as a useful illustration.

95. It must be remembered also, that in many institutions the teaching of Ayurveda, for instance, is carried out by those who have had no training in modern medicine, and similarly teaching of modern subjects is carried out by those who are not acquainted with the principles of Ayurveda. This is, indeed, a serious handicap for any integrated teaching in these schools. The Chopra Committee in recognising this had to suggest, therefore, that the ultimate integration will have to be made in three stages and in the first stage, both the systems will have to be taught concurrently. We are still in the first stage. However, we cannot ignore the view expressed by many, that this procedure has neither benefited the students nor promoted the cause of Ayurveda in any manner. The apprehension that if this process continues, it will not be long before the indigenous systems become extinct, is indeed shared by many members of the Committee. There is thus an urgent need of upgrading these teaching institutions in all possible ways. In addition the Committee consider that by prescribing a higher basic qualification and consequently a higher age for admission of students for starting the medical studies suitable conditions will be created for the students to understand and assimilate

medical subjects properly. In this way it will be possible to ensure the production of such medical graduates as would, eventually, be able to advance, to some extent, the cause of the indigenous systems of medicine.

96. In addition, we feel that if an attempt is made at this stage to cut short the period of training required for a satisfactory conclusion of studies in these schools, and the standard of admission is also lowered, the ultimate harm that will be done to the cause of Ayurveda will be considerable. This is, indeed, what is very likely to happen if the suggestion to institute a diploma course, even for a specific period, is accepted. The study of Ayurveda has been neglected so long in the past that it would be a distinctly retrograde step to take any measures which will continue the existing state of affairs even for a short period. Therefore, there should be only one course of study for the indigenous systems of medicine, i.e. a course extending to a minimum period of five years. The difficulty of arranging a curriculum satisfactorily, even within this period, has already been referred to previously. Those difficulties will be further accentuated if the period of training is in any way reduced. A shorter period of training, for example, for a licentiate course, has been advocated, firstly on the ground of economy, and secondly to gain time to make satisfactory arrangements for the institution of a degree course. In our opinion, the cost of upgrading, firstly the departments of anatomy and physiology in these institutions, and secondly of making the provision of well equipped laboratories and adequate hospital facilities, even for the licentiate course, will not be materially different to those needed for instituting the same facilities in any institution for the teaching of the whole degree course. On the other hand, such a procedure will only retard, and we are afraid perhaps indefinitely, the progress of medical education which is so urgently needed in the country. The creation of superior and inferior classes in the medical profession has not been viewed with favour by members of the profession, and in our opinion it would not be desirable to ignore that view.

97. We wish to draw attention to another aspect of the question which deserves equal consideration. The creation of licentiate class, particularly for short periods, will ultimately raise other problems, viz., the necessity at some stage or other for the creation of facilities for giving them advance training in order to enable them, ultimately, to secure the degree qualification. This has been the development even in the licentiate classes of the modern system of medicine. The Government are well aware of the magnitude of the problem which has been presented to them in that respect. It is worth consideration whether by instituting the policy mentioned above similar problems should be again deliberately created. At the same time, in order to absorb in the profession the existing practitioners of medicine, we envisage that special facilities will have to be provided for that purpose in due course. In the opinion of the Committee it would be advisable to concentrate on the creation and maintenance of only one uniform standard of medical education i.e. the degree standard. As a logical corollary to the above, we recommend that the existing four years' course in the indigenous systems of medicine should be abolished, and facilities created for the products of these institutions to obtain the higher qualification of a degree course.

98. The Committee have noted that at present many States award a different qualification to students successfully completing the period of training prescribed for them. When arrangements are made for the institution of a degree course all over the country, the question of instituting one uniform qualification for these students, e.g. Ayurveda Acharya, should be considered.

### General summary and implementation of recommendations

99. We wish finally to draw attention to the manner in which some of the recommendations made by us should be implemented. From what has been stated, it will be clear that no advance in the proper understanding of the indigenous systems of medicine is possible unless at least one centre for research in those systems, is brought into being as soon as possible. In the opinion of the Committee, this recommendation should receive the first priority at the hands of the authorities concerned. We believe that a beginning in this direction could be made in some manner by appointing some of the senior members of the staff recommended for the purpose to work in association with the existing hospital facilities at Jamnagar, so that a beginning is made in the working of the essential details envisaged in para. 26 of this report. We hope that in the establishment of such a centre all agencies, governmental and others, will co-operate in spite of the current financial stringency.

100. We have drawn attention to the urgent need for improving the teaching facilities in the existing Ayurvedic and Unani institutions in the country. We recommend that the upgrading of such institutions should receive the first priority at the hands of the State Governments and all available funds should be allotted for this specific purpose rather than for the establishment of similar or ancillary new activities. It will be necessary to provide adequate laboratory and hospital facilities for these institutions especially those required to ensure the teaching of preclinical subjects to a satisfactory standard. The Committee are also of the opinion that teachers of modern subjects in such institutions should be encouraged to acquire adequate knowledge of indigenous systems of medicine in order to enable them to make significant contributions towards the re-orientation of the teaching programme of these institutions.

101. It is equally necessary to insist on higher entrance qualification for the students undergoing training in these institutes than that obtaining at present. In the opinion of the Committee the minimum qualification for any student undergoing training in medical sciences should be the intermediate in science (medical group) of any recognised university, with adequate knowledge of Sanskrit or Arabic for the students of the indigenous systems of medicine.

102. The Committee are aware that in the present financial stringency the State Governments may find it difficult to implement these recommendations *vis-a-vis* all the existing institutions of indigenous medicines in their areas. We suggest that at least one institution should be selected by each State Government for the upgrading in the manner indicated above.

103. The Committee are definitely of the opinion that the institution of a licentiate course will not be in the best interest, either of the students or the public. In their opinion the training only to the degree standard should be instituted in all these institutions.

104. It will be noted that a tentative curriculum has been suggested for adoption in existing Ayurvedic institutions. But it is not claimed that this curriculum is really a satisfactory one in all respects. The Committee believe that when the results of the work at the Central Research Institute contemplated above are available, the time will be ripe for further revision of such curricula. The Committee are aware that there is a school of thought which holds that no good would come out of the

concurrent teaching of the two systems of medicine—modern and indigenous. The Committee are, indeed, aware of some of the possible criticisms levelled against the method of concurrent teaching, as at present practised, but they feel that the alternative of leaving things as they are would be fraught with even greater danger. The Committee had to recognise the point of view that the public have a right to demand that all those who are to be trained for the specific purpose of practising the medical profession should have that knowledge also which modern medicine can now give. In view of these considerations the Committee had to suggest that a system of concurrent teaching must necessarily be followed for the present in institutions devoted to the teaching of indigenous systems of medicine.

105. The Committee had the benefit of the advice of the member representing the Unani system of medicine only at a late stage in their deliberations. However, the conclusions arrived at would equally apply to the Unani system of medicine. In the operative part of our recommendations, adjustments will have to be made when the teaching of Unani system is taken in hand. The set up will be very nearly the same in the two cases, *viz.*, Ayurvedic and Unani systems.

C. G. PANDIT (Chairman).

V. SUBRAHMANYAM (Member).

GANESH DATT SARASWATA (Member).

R. R. PATHAK (Member).

D. N. BANERJI (Member).

B. B. YODH (Member).

\*A. N. GOYLE (Member).

J. N. RAY (Member).

MOHD. ILYAS KHAN (Member).

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\* Subject to a note of dissent.

**Minute of dissent on the proposed concurrent teaching of modern and Ayurvedic subjects in the institutions of Ayurvedic medicine, by Dr. A. N. Goyle**

I am in complete agreement with the views expressed by the Committee in Part I in regard to the establishment of a research institute on the first term of reference.

Regarding the second term of reference, I endorse the remarks of the Committee in para. 68 of Part II "that it would be premature to make any concrete suggestions for incorporating the teaching of indigenous systems at any appropriate stage in the curriculum for the undergraduate students". I agree that even at the post-graduate level the study of the indigenous systems is not practicable for the reasons stated in para. 68 and it would be desirable to have lectures on the history of medicine with special reference to Indian Medicine in the modern medical colleges or if funds permit to institute a Chair in the history of medicine in the Universities (para. 70).

I am fundamentally opposed to the recommendation of the Committee in regard to the third term of reference, made in Part II, namely, the introduction of modern subjects in the curriculum of classes in the schools of indigenous medicine. The Committee has made no attempt to justify the advisability and practicability of teaching modern medical subjects to students of the indigenous systems. It is not clear from the report what advantages are likely to accrue from the concurrent teaching of the two systems. There appears to be no justification for the statement made in para. 78 that the view that "any course of medical training in the institutions of indigenous systems, would have to include, therefore, not only instruction on the fundamentals of the indigenous systems of medicine but adequate knowledge of modern medicine in all its aspects", has been accepted in principle by many. The Indian Medical Association representing the vast majority of practitioners trained in modern system of medicine and distinguished medical educationists and even some responsible members of the Government have criticised adversely the concurrent teaching, synthesis or integration of the two systems. Even so strong an advocate of the indigenous systems of medicine as the Hon'ble C. B. Gupta said in his inaugural address at the annual meeting of the XXVI All India Medical Conference held at Allahabad in 1950, "While commending to you the adoption of the good and useful aspects of the Indian medicine, I emphatically declare that no advance which is not supported by scientific investigation and practice should be countenanced by any State. In any case, there can be no question of any unscientific system supplanting the scientific system. Only whatever is good in Ayurvedic or Unani and stands the test of scientific scrutiny must be translated and synthesised in the modern scientific and added to the fund of world knowledge". It may be that the original idea was to have cheap doctors. That is why the Chopra Committee lent its support to the astounding view of Lt-General J. B. Hance that, "Though there is undoubtedly danger in having half-trained doctors practising medicine, yet, in rural districts, it is better to have a half-trained doctor than no doctor at all". The old saying that "a little knowledge is a dangerous thing" is still true today as when first written. It is not true that it is better to have a half-trained doctor than no doctor at all. An ill-equipped, ill-trained doctor can do more harm than no doctor. I would

like to point out here that the Hon'ble Rajkumari Amrit Kaur strongly objected to the lowering of medical education in order to provide medical relief to rural areas. She said: "The community has the right to demand that those who deal with the physical and mental disabilities of the people shall be as competent as possible from the technical point of view." Indeed every one must view with great concern all attempts to lower standards of medical degrees on the plea that we must give some sort of aid and relief to the rural areas. Lowering of standard of education can never be a remedy for any disease. On the contrary they will in the long run defeat the very object in view. (Journal of the Indian Medical Association, 1950). It is undoubtedly true that most of the ailments from which people in villages and towns suffer are of comparatively simple nature. These can be treated with simple remedies and are even cured without any remedy. It is for these reasons that all kinds of systems of medicine flourish in India. We all know that nature is more helpful than a bad doctor. Now that the Committee has recommended 4½ years' course after Inter science, the introduction of modern subjects cannot be justified even on the ground of cheapness. Moreover, quality should not be sacrificed for cheapness.

The principles on which the Ayurvedic system is based are fundamentally different from those of the modern system and it would be unfair to the student, the teacher and the public to have institutions where the two different systems are taught—unfair to the student because of the confusion and chaos likely to be created in his mind if an attempt is made to relate ancient theories to the modern science; unfair to the teacher because of his inability to reconcile the two different systems; unfair to the public because it will be served by persons who are neither good Ayurvedists nor good practitioners of modern medicine. It is obviously better to be treated by a person who has been properly trained in one system of medicine than by a person who has a slight superficial knowledge of the two systems. The teachers of modern medicine are of the opinion that a period of 4½ years to 5 years is just the minimum in which adequate training can be given. One fails to understand how sufficient training in the two systems can be imparted in the same period. The only result of the concurrent teaching of the two systems in the same period would be that a student would have only a smattering of both the systems.

It would not be possible for the teachers to discuss with the students the diagnosis, pathology and treatment, for example, of a case of pneumonia on the basis of the principles of modern and ancient systems of medicine. And what about the patient? How is he going to be treated? The advocates of the Ayurvedic system at an institution where both the systems are taught would naturally insist that the patients suffering from pneumonia should be treated according to their own system which they claim is complete, perfect and scientific. On the other hand, the modern doctor would advocate the use of penicillin and sulphanilamide which have been proved to be remarkably effective in the treatment of pneumonia. It might be suggested that the patient would be treated according to the best method. But who is going to decide? Till such time as the claims of the adherents of the Ayurvedic system are found to be in accord with the criteria formulated by reason and science at the Research Institute recommended in Part I, it would be futile to diagnose and treat the patient on the basis of principles of Ayurvedic medicine.

There is much room for improvement in the teaching of Ayurvedic system in the schools already established. The Committee has rightly

laid stress on the low standard of medical education imparted in these institutions. The standard of training in Ayurvedic schools may with advantage be brought into line with that prescribed by the Medical Council of India for modern medicine. For example, the number of lectures in different subjects of Ayurvedic system, the period to be spent by the student in each department of the hospital, the number of beds that should be allotted to each student, etc. may be the same as those prescribed for the student of modern system. One would like these improvements to be made. More funds may be provided for improvement and additions in equipment and staff of the schools of Indian medicine. Funds are already limited and if they are spent on the equipment and staff required for modern subjects, the standard of teaching is bound to become still lower than at present.

For the reasons stated in the preceding paragraphs, I am unable to agree to the recommendation of the Committee that there should be concurrent teaching of the two systems of medicine (modern and Ayurvedic) in the institutions of Ayurvedic medicine.



**APPENDIX I**  
**Statement No. I**

Sl. No.	Nature of the post	No. of posts	Scale	Rate of dearness allowance	1st Year	2nd Year	3rd Year	4th Year	5th Year
					100/-				
<b>AYURVEDIC TEAM.</b>									
1	Director	One	700—50—1200+S. P. 250/-p.m.	85/-	18,840	20,040	21,600	22,800	24,00
2	Physicians	Two	700—50—1200	70/-	5,040	5,340	5,640	5,940	6,24
3	Dursankha	One	350—25—750	70/-	15,120	16,020	16,920	17,820	18,720
4	Junior Assistants	Three	350—25—750	70/-	5,040	5,340	5,640	5,940	6,240
5	Statistician	One	350—25—750	70/-	5,040	5,340	5,640	5,940	6,240
6	Pharmacist	One	350—25—750	70/-	5,040	5,340	5,640	5,940	6,240
6	Laboratory Assistant	One	60—5/2—75—3—105	45/-	1,260	1,260	1,320	1,320	1,380
7	House Physicians	Five	80—5—120—EB—8— 200—10/2—220.	45/-	7,500	7,800	8,100	8,400	8,700
TOTAL									
					57,840	61,140	64,860	68,160	71,520
<b>MODERN TEAM</b>									
1	Physician	One	700—50—1200	85/-	9,420	10,020	10,800	11,400	12,000
2	Pathologist-cum-Bacteriolo- gist.	One	500—50—1000	70/-	6,840	7,620	8,220	8,820	9,420
3	Biochemist	One	500—50—1000	70/-	6,840	7,620	8,220	8,820	9,420
4	B. Sc. Pharmacist	One	275—25—500—EB— 30—590.	60/-	4,020	4,320	4,740	5,040	5,340
5	House Physicians	Five	80—5—120—EB—8— 200—10/2—220.	45/-	7,500	7,800	8,100	8,400	8,700
6	Laboratory Assistants	Three	60—5/2—75—3—105	45/-	3,780	3,780	3,960	4,140	4,140
TOTAL									
					51,000	54,360	57,900	60,960	64,200

Statement No. 2.

S. No.	Nature of the post	No. of posts	Scale	Rate of doariness allowance p. m.	1st Year	2nd Year	3rd Year	4th Year	5th Year
1	Office Supervisor	One	200—15—500	55/-	3,060	3,300	3,480	3,660	3,840
2	Accountant	One	160—10—330	55/-	2,580	2,700	2,820	2,940	3,060
3	Stenographer	One	80—5—120—EB—8— 200—10½—220.	45/-	1,500	1,560	1,620	1,680	1,740
4	Assistant	One	Do.	45/-	1,500	1,560	1,620	1,680	1,740
5	Clerks	Two	55—3—85—4—125—5— 130.	45/-	2,400	2,472	2,544	2,616	2,688
6	Typists	Two	Do.	45/-	2,400	2,472	2,544	2,616	2,688
7	Cashier	One	80—5—120—EB—8— 200—10½—220.	45/-	1,500	1,560	1,620	1,680	1,740
8	*Peons	Four	30—1—35	35/-	3,120	3,144	3,168	3,192	3,216
					18,060	18,768	19,416	20,064	20,712
					TOTAL				

(E)  
\*2 peons for office and 2 peons for laboratory work.

**HOSPITAL FOR 75 BEDS**  
**PAY AND DEARNESS ALLOWANCE**

S. No.	Nature of the post	No. of posts	Scale.	Rate of D. A.	1st Year	2nd Year	3rd Year	4th Year	5th Year
1	Matron	One	320—20—400—25—450	70/-	4,680	4,920	5,160	5,400	5,640
2	Assistant Matron	One	200—10—300	55/-	3,060	3,240	3,360	3,480	3,600
3	Night Sister	One	200—10—300	55/-	3,060	3,240	3,360	3,480	3,600
4	Theatre Sister	One	150—7—185—8—225	50/-	2,400	2,544	2,688	2,712	2,796
5	Ward Sisters	Four	150—7—185—8—225	50/-	9,600	10,176	10,512	10,848	11,184
6	Staff nurses	Twelve	100—5—125—6—185	45/-	20,880	22,320	23,040	23,760	24,480
7	Ward attendants	Eight	30—4—35	35/-	6,240	6,228	6,336	6,384	6,432
8	Compounders	Three	55—3—85—EB—4—125 —5—130.	45/-	3,600	3,708	3,816	3,924	4,032
9	Cooks	Three	30—4—35	35/-	2,340	2,358	2,376	2,394	2,412
10	Kitchen servants	Three	30—4—35	35/-	2,340	2,358	2,376	2,394	2,412
11	Sweepers	Eight	30—4—35	35/-	6,240	6,288	6,336	6,384	6,432
12	Mistry	One	40—2—60	35/-	900	924	948	972	996
13	Malis	Two	30—4—35	35/-	1,560	1,572	1,584	1,596	1,608
					66,900	69,936	71,832	73,728	75,624

(iii)

Statement No. 4.

Consolidated statement of the expenditure on pay and allowances of the staff including that of a hospital for 75 beds

(iv)

S. No.	Year	Ayurvedic Team	Modern Team	Office	Hospital	Contingencies (Stationery & office equipment and travelling allowance)	Hospital equip- ment, medicines, diet for patients, etc.	Total
1	1st Year	57,840	51,000	18,060	66,900	25,000	2,12,000	4,30,800
2	2nd Year	61,140	54,360	18,768	69,936	25,000	2,12,000	4,41,204
3	3rd Year	64,860	57,900	19,416	71,832	25,000	2,12,000	4,51,008
4	4th Year	68,160	60,960	20,064	73,728	25,000	2,12,000	4,59,912
5	5th Year	71,520	64,200	20,712	75,624	25,000	2,12,000	4,69,056

(v)  
APPENDIX II.

FROM

Dr. C. G. PANDIT, M.B.,B.S., Ph.D., D.P.H., D.T.M., F.N.I.

Chairman  
Committee on Indigenous Systems of Medicine,  
New Delhi.

TO

All Administrative Medical Officers of States.

Dated, New Delhi the 26th December, 1949.

SUBJECT:—Committee on Indigenous Systems of Medicine—Recommendations—Establishment of a Research Centre.

SIR,

As you are aware, the Government of India intend to establish a research centre in Ayurveda at some suitable place in the country and have appointed a committee to work out a detailed scheme for the development of such a centre. As the Chairman of this committee, I have been asked to ascertain the views of your Government in this matter. The Committee in their preliminary deliberations have decided that the proposed centre should be established in association with an existing institution.

The committee is specially interested to know whether in the opinion of your Government there exists any institution, both from the point of view of existing facilities as well as the programme of development envisaged for it, which can be considered suitable for this purpose. The committee will be grateful to receive the following information with regard to such institution:—

- (i) the nature of accommodation at present available to the institution;
- (ii) whether facilities exist for its further expansion;
- (iii) whether the institution possesses a library; information on the number of volumes, ancient texts, manuscripts, current Ayurvedic Journals, etc., may be given;
- (iv) laboratory facilities, if any, and the number of beds available in the attached hospital;
- (v) whether herbarium facilities are available either in the institution or in its vicinity;
- (vi) whether the institution possesses a pharmacy; if so, its staff and equipment.

2. It is likely that the State Governments have already under their consideration a scheme for the development of such an Ayurvedic centre with their own funds. The committee will be grateful to have some information on this and as to the manner in which the scheme will be implemented.

3. The committee would be grateful to have an early reply in order to enable them to consider the question at their next meeting to be held at the end of January, 1950.

Yours faithfully,  
C. G. PANDIT,  
Chairman.

## APPENDIX III

No. F. 28-2/49-MI.

GOVERNMENT OF INDIA

MINISTRY OF HEALTH.

New Delhi, the 2nd December, 1949.

FROM

M. R. KOTHANDARAMAN, ESQUIRE,

Deputy Secretary to the Government of India.

To

Dr. C. G. PANDIT, M.B.,B.S. (Bom.), D.P.H. (Lond.), D.T.M. (Eng.),  
Ph.D. (Lond.),

Secretary, Indian Research Fund Association, New Delhi.

SUBJECT:—Committee on Indigenous Systems of Medicine—Recommendations—Establishment of a research centre.

SIR,

I am directed to say that the Government of India have decided to appoint a Committee consisting of the undermentioned persons—

1. Dr. C. G. Pandit, Secretary, Indian Research Fund Association,  
New Delhi. Chairman.

## Members

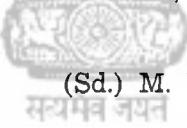
2. Dr. V. Subrahmanyam, Member, Constituent Assembly of India.
3. Kaviraj Ganesh Datt Saraswata, Principal, Rishikul Ayurvedic College, Hardwar.
4. Dr. R. R. Pathak, Principal, A. S. K. Ayurvedic College, Begusarai, Distt. Monghyr, Bihar.
5. Dr. D. N. Banerji, R. G. Kar Medical College, Calcutta.
6. Dr. B. B. Yodh, Professor of Medicine, Grant Medical College, Bombay.
7. Dr. A. N. Goyle, Principal, Glancy Medical College, Amritsar.
8. Dr. J. N. Ray, Deputy Director-General of Industries and Supplies, Ministry of Industry and Supply.
9. A Unani doctor to be appointed,  
with the following terms of reference;

(1) To work out and submit to Government a detailed scheme for the development of a centre of research in Ayurvedic and Unani systems of medicine on as broad a basis as possible on the lines indicated in paragraph 251 of Volume I of the Report of the Committee on Indigenous Systems of Medicine. In carrying out research at this centre

modern scientific methods are the ones to be utilised in order that the fruits of such research may be of proved value and acceptable all over the world.

- (2) To investigate and define in what manner special training in Ayurvedic and Unani systems can be incorporated during the last year or so of the under-graduate medical course in modern medical colleges, for the benefit of those desiring to qualify themselves in these systems; or alternatively, to suggest how Ayurveda or Unani can be fitted in as subjects for post-graduate medical study. In examining this matter the Committee will give due consideration to the fact that India cannot afford to permit her medical practitioners, whatever system they may individually adopt, to receive training which will fall short of the standards of medical education considered necessary in all progressive countries.
- (3) To make recommendations regarding the policy to be adopted as regards the continuance, with such modifications as may be necessary, of certain existing Ayurvedic and Unani medical schools and colleges in which some teaching in subjects such as anatomy, physiology, etc., is carried out, keeping in view the need for establishing a uniform system of medical education throughout the country and for ensuring the utilisation, to the best advantage, of the available resources in the country in men and material for the development of medical education.

The report of the Committee should kindly be submitted to the Government of India by the end of March, 1950.



Yours faithfully,

(Sd.) M. R. KOTHANDARAMAN,

*Deputy Secretary.*

## APPENDIX IV

Copy of paragraph 251 of Volume I of the Report of the Committee on Indigenous Systems of Medicine (Chopra Committee).

### RESEARCH CATEGORIES

“251. We now proceed to lay down the main categories under which research should be conducted.

- (i) Literary research
- (ii) Research on fundamental doctrines of Ayurveda (including Sidha) and Unani Tibb, *viz.*
  - (a) The Panchabhutta theory of matter.
  - (b) The Tridosha theory of physiology and pathology.
  - (c) The Rasa Guna, Virya, Vipaka and Prabhava principles of pharmacology and therapeutics.
- (iii) Clinical research.
- (iv) Pharmacological research in drugs and medicinal preparations: both organic and inorganic.
- (v) Research in diet.
- (vi) Research in psychological medicine.”



### Subjects

1. Pharmacology, Materia medica and Pharmacy with Rasa Shastra.
2. Pathology (Vikriti vijnan).
3. Medical jurisprudence and Toxicology (Vyavaharayurveda and Agada tantra).
4. Hygiene and Preventive Medicine (Swastha vrittam).
5. Medicine and Therapeutics (Kaya chikitsa).
6. Surgery (Salya-salakya tantra).
7. Gynaecology and obstetrics (Striropa Prasuti Tantram).
8. History of medicine.

NOTE.—The candidate may appear at the examinations on the subjects No. 1, 2, 3 & 4 at the end of the 4th year. No examination on subject 8. The examinations on the subjects No. 5, 6 & 7 will be at the end of the 5th year.

### Course of studies

1. *Pharmacology, Materia Medica and Pharmacy with Rasa Shastra.*—
  - (a) A course of lectures and demonstrations on Pharmacology including Rasa Shastra extending over one year.
  - (b) A course of demonstration and practical work in practical Pharmacy extending over one year.
  - (c) A course of lectures and demonstrations on the doctrine of Rasa, Guna, Vipaka Veerya and Prabhava.
2. *Pathology*—(Vikriti vijnan).
  - (a) A course of lectures and demonstrations and practical work in general and special pathology extending over two years.
  - (b) A course of lectures, demonstrations and practical work in bacteriology and elementary parasitology extending over a period of two years.
  - (c) A course of instructions in chemical pathology and in clinical pathology and bacteriology.
  - (d) A certificate of having assisted in the conduct of at least 10 autopsies as a post-mortem clerk. The candidate will be required to submit to the examiners the records of 10 autopsies which they have attended.
3. *Forensic Medicine*—(Vyavaharayurveda and Agadha tantra).
  - (a) A course of instructions including demonstrations extending over one year.
  - (b) The candidate will be required to produce a certificate of having attended six medico-legal autopsies.
4. *Hygiene and Preventive Medicine*—(Swastha vrittam).
  - (a) A course of instructions in preventive medicine including demonstrations extending over one year.

NOTE.—The courses of instructions in subjects 3 and 4 should be given in the 4th year.

## APPENDIX V

## CURRICULUM OF STUDIES

## FOR THE DEGREE OF

## AYURVEDACHARYA EXAMINATION

*The first professional examination*

(This will extend over a period of two years).

## Subjects

1. Biochemistry, Biophysics and Padartha Vijnan.
2. Human Anatomy including elementary Embryology. (Manava Sharira rachana and Garbha vijnan).
3. Human physiology, Normal psychology and Tridosha doctrine (Sharira Kriya Manovijnan).
4. An introduction to pharmacology (Bhaisajya vijnan).

## Course of Studies

1. *Biochemistry, Biophysics and padarthavijnan—*
  - (a) A course of lectures and demonstrations on Biochemistry and Biophysics.
  - (b) A course of lectures on Padartha Vijnan (Dravya-Guna-Karma-Samanya-Vishesha-Samavaya-Praman etc.)
  - (c) A practical course on Biochemistry and Biophysics.
2. *Human Anatomy including Embryology—*  
(Manava Sharira rachana and Garva vijnan).
  - (a) A course of lectures and demonstrations on human Anatomy including elementary Embryology with special reference to their applications to medicine, surgery, gynaecology and obstetrics.
  - (b) A course of dissection of the whole body to the satisfaction of their teacher.
3. *Human physiology, Normal psychology and Tridosh doctrine* (Sharira Kriya, Manovijnan).
  - (a) A course of lectures and demonstration on physiology.
  - (b) A course of lectures and demonstrations on Tridosha doctrine.
  - (c) A practical course on Histology, Experimental physiology and physiological chemistry.
  - (d) A course of instructions in elementary psychology.
4. *An introduction to pharmacology* (Bhaisajya vijnan).
  - (a) A course of lectures and demonstrations on general pharmacology.

**NOTE.**—Pharmaceutical details as to the preparations of drugs will not form a part of this examination.

## Final Professional Examination

This will extend over a period of three years.

(Dravyaguna, Bhaisajya kalpana).

**5. Medicine and Therapeutics—(Kaya chikitsa).**

(a) A course of lectures and clinical demonstrations in medicine including diseases of infancy and childhood, physical therapy and mental diseases (not less than 10 lectures and demonstrations), Dermatology, Radiology and Electrotherapy and their application to medicine.

(b) Throughout the whole period of instructions in medicine, importance of the preventive aspect of the subject shall be emphasised.

(c) The course of instructions in medicine shall include applied anatomy and applied physiology and also practice of clinical pathology and laboratory methods and their applications to the investigations of diseases.

(d) A medical clinical clerkship for a period of nine months, of which six months must be spent in the hospital wards and 3 months in the outpatients department, and not less than one month in a children ward or in a children out-patients department.

(e) Instructions in therapeutics and prescribing including (i) panchkarma chikitsa (ii) pharmaceutical therapeutics (iii) psycho-therapy (iv) dietetics and (v) the principles of nursing.

**6. Surgery—(Salya-salakya tantra).**

(a) A course of lectures and clinical demonstrations in surgery including (i) diseases of infancy and childhood, (ii) disease of eye, ear, nose and throat, (iii) orthopaedics, (iv) venereal diseases, (v) dental surgery, (vi) administration of anaesthetics, (vii) Radiology and electro-therapy in their application to surgery.

(b) The courses of instruction in surgery shall include applied anatomy and applied physiology.

(c) A surgical dressership for a period of nine months of which six months must be spent in a hospital wards and three months in the out-patient wards.

(d) A course of practical instructions in operative surgery including operations on the cadaver to be performed by the students themselves.

(e) Practical instructions in minor surgery on the living body.

(f) A course of lectures and clinical demonstrations in the diseases of ear, nose, throat and eye (including instructions on refraction) extending over one year.

**7. Gynaecology and obstetrics—(Strioga & Prasuti tantra).**

(a) A course of lectures and clinical demonstrations extending over one year in gynaecology, obstetrics and hygiene of the new born.

(b) The course of instruction shall include applied anatomy and physiology of pregnancy and labour.

(c) An appointment for six months as a clinical clerk in maternity ward during which period candidate must have conducted 10 labour cases.

(d) A gynaecological clinical clerkship for a period of nine months of which six months must be spent in the hospital ward and three months in out-patients department including not less than one month in antenatal out-patient department.

**8. History of medicine—**

A course of 10 lectures on history of medicine.